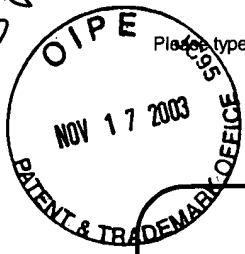


2825



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<b>TRANSMITTAL FORM</b> (to be used for all correspondence after initial filing)		Applicati n Number	10/046,858
		Filing Dat	1/13/02
		First Named Inventor	Steven Teig, et al.
		Group Art Unit	2825
		Examiner Name	
Total Number of Pages in This Submission		Attorney Docket Number	SPLX.P0124

Enclosures (Check all that apply)		
<input type="checkbox"/> Fee Transmittal Form <input type="checkbox"/> Fee Attached <input type="checkbox"/> Amendment/Reply <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declarations(s) <input type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input checked="" type="checkbox"/> Information Disclosure Statement <input type="checkbox"/> Certified Copy of Priority Documents <input type="checkbox"/> Response to Missing Parts/ Incomplete Application <input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53	<input type="checkbox"/> Assignment Papers (for an application) <input type="checkbox"/> Drawing(s) <input type="checkbox"/> Licensing-related Papers <input type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, Number of CD(s) _____	<input type="checkbox"/> After Allowance Communication to Group <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input type="checkbox"/> Appeal Communication to Group (Appeal Notice, Brief, Reply Brief) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input checked="" type="checkbox"/> Other Enclosures (Listed below): <b>Postcard Form 1449</b> <b>88 cited references</b>
<b>Remarks:</b>		
<b>SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT</b>		
Firm Or Individual name	Mani Adeli, Reg. No. 39,585 of Stattler Johansen & Adeli LLP	
Signature		
Date	November 13, 2003	

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PATENT  
Docket No. SPLX.P0124

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Mani Adeli

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In the application of:

Steven Teig, et al.

Serial No.: 10/046,858

Filing Date: 1/13/02

For: METHOD AND APPARATUS FOR  
PLACING CIRCUIT MODULES

**INFORMATION DISCLOSURE  
STATEMENT UNDER 37 C.F.R. § 1.97**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

Pursuant to 37 C.F.R. § 1.97 and § 1.98, applicants submit with this Information Disclosure Statement the attached Form PTO-1449, and copies of the documents listed in the 1449 form for consideration by the Examiner. The Examiner is requested to make these documents of record. Applicants would appreciate the Examiner initialing and returning the Form PTO-1449, indicating that the information has been considered and made of record herein.

This Information Disclosure Statement under 37 C.F.R. § 1.97 is not to be construed as a representation that: (i) a complete search has been made; (ii) additional information material to

the examination of this application does not exist; (iii) the information, protocols, results and the like reported by third parties are accurate or enabling; or (iv) the above information constitutes prior art to the subject invention.

This Information Disclosure Statement is submitted within three months of the application filing date or before the mailing date of a first Office Action on the merits; accordingly, no fee or separate requirements are required.

However, in the unlikely event that the Patent Office determines that additional fees, extension and/or other relief is required, applicant petitions for any required relief including extensions of time and authorizes the Assistant Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to **Deposit Account No. 50-1128** referencing SPLX.P0124. However, the Assistant Commissioner is not authorized to charge the cost of the issue fee to the Deposit Account.

Dated: November 13, 2003

Respectfully submitted,

By: \_\_\_\_\_

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Phone No. (650) 752-0990 x102

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Substitute for form 1449A/PTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> (use as many sheets as necessary)				<b>Application Number</b>	10/046,858
				<b>Filing Date</b>	1/13/02
				<b>First Named Inventor</b>	Steven Teig, et al.
				<b>Group Art Unit</b>	2825
				<b>Examiner Name</b>	
<b>Sheet</b>	<b>1</b>	<b>of</b>	<b>7</b>	<b>Attorney Docket Number</b>	SPLX.P0124

**U.S. PATENT DOCUMENTS**

Examiner* Initials	Cite No. <sup>1</sup>	U.S. Patent Document Number Kind Code <sup>2</sup> (if known)	Date of Publication MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	1.	2001/0009 031 A1	07-19-2001	Nitta et al.	
	2.	2002/0182 844 A1	12-05-2002	Igarashi et al.	
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	6.	4,855,929	08-08-1989	Nakajima	
	7.	5,267,176	11-30-1993	Antreich et al.	
	8.	5,375,069	12-20-1994	Satoh et al.	
	9.	5,587,923	12-24-1996	Wang	
	10.	5,618,744	04-08-1997	Suzuki et al.	
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	12.	5,637,920	06-10-1997	Loo	
	13.	5,640,327	06-17-1997	Ting	
	14.	5,663,891	09-02-1997	Bamji et al.	
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	17.	5,798,936	08-25-1998	Cheng	
	18.	5,838,583	11-17-1998	Varadarajan et al.	
	19.	5,889,677	03-30-1999	Yasuda et al.	
	20.	5,980,093	11-09-1999	Jones et al.	

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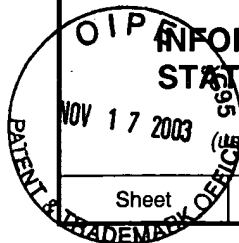
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				Filing Date	1/13/02
				First Named Inventor	Steven Teig, et al.
				Group Art Unit	2825
				Examiner Name	
				Attorney Docket Number	SPLX.P0124
Sheet	2	of	7		

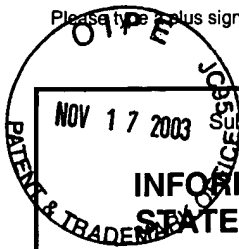
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	21.	6,070,108		05-30-2000	Andreev et al.
	22.	6,128,767		10-03-2000	Chapman
	23.	6,209,123	B1	03-27-2001	Maziasz et al.
	24.	6,253,363	B1	06-26-2001	Gasarov et al.
	25.	6,295,634	B1	09-25-2001	Matsumoto
	26.	6,324,674	B2	11-27-2001	Andreev et al.
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	34.	6,415,422	B1	07-02-2002	Mehrotra et al.
	35.	6,442,743	B1	08-27-2002	Sarrafzadeh et al.
	36.	6,448,591	B1	09-10-2002	Juengling
	37.	6,473,891	B1	10-29-2002	Shively
	38.	6,480,991	B1	11-12-2002	Cho et al.
	39.	6,490,713	B2	12-03-2002	Matsumoto
	40.	6,519,751	B2	02-11-2003	Sriram et al.
	41.	6,543,043	B1	04-01-2003	Wang et al.
	42.	6,546,540	B1	04-08-2003	Igarashi et al.
	43.	6,557,145	B2	04-29-2003	Boyle et al.

Examiner Signature		Date Considered	
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Substitution for form 1449A/PTO <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> (use as many sheets as necessary)				Applicant Number	10/046,858
				Filing Date	1/13/02
				First Named Inventor	Steven Teig, et al.
				Group Art Unit	2825
				Examiner Name	
Sheet	3	of	7	Attorney Docket Number	SPLX.P0124

## U.S. PATENT DOCUMENTS

44.	6,567,967	B2	05-20-2003	Greidinger et al.
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## FOREIGN PATENT DOCUMENTS

Examiner* Initials	Cite No. <sup>1</sup>	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T 6
		Office <sup>2</sup>	Number <sup>4</sup>	Kind Code (if known)				
	45.	JP	411296560	A	Matsumoto et al.	10-29-1999	with English translation of Abstract;	
	46.	JP	2000-82743	A	Igarashi et al.	03-21-2000	with Japanese Patent Office's English translation of Abstract; and with English translation of the application.	✓
	47.	JP	H03-173471	A	Tawada et al.	07-26-1991	with Japanese Patent Office's English translation of Abstract; and with English translation of the application.	✓
	48.	JP	H05-243379	A	Masako Kubota	09-21-1993	with Japanese Patent Office's English translation of Abstract; and with English translation of the application.	✓
	49.	JP	H05-102305	A	Akihiro Sato	04-23-1993	with Japanese Patent Office's English translation of Abstract; and with English translation of the application.	✓

Examiner Signature		Date Considered	
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**INFORMATION DISCLOSURE  
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Sheet

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of

7

Applicati n Number

10/046,858

Filing Date

1/13/02

First Named Inv nt r

Steven Teig, et al.

Group Art Unit

2825

Examiner Name

Attorney Docket Number

SPLX.P0124

**FOREIGN PATENT DOCUMENTS**

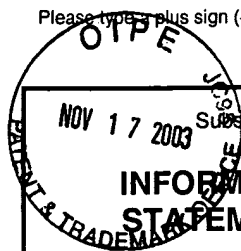
50.	JP	H07-86407	A	Shinpei Miura	03-31-1995	with Japanese Patent Office's English translation of Abstract; and with English translation of the application.	√
51.	JP	H09-162279	A	Masaaki Yoshida	06-20-1997	with Japanese Patent Office's English translation of Abstract; and with English translation of the application.	√

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SignatureDate  
Considered

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				First Named Inventor	Steven Teig, et al.
				Group Art Unit	2825
				Examiner Name	
Sheet	5	of	7	Attorney Docket Number	SPLX.P0124

### FOREIGN PATENT DOCUMENTS

### NON PATENT LITERATURE DOCUMENTS

Examiner* Initials	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T 6
	52.	Ahuja, R. et al., Faster Algorithms for the Shortest Path Problem, Journal of the Association for Computing Machinery, vol. 37, No. 2, April 1990, pp. 213-223.	
	53.	Brady, L. et al., Channel Routing on a 60° Grid, extended abstract, pp. 956-931.	
	54.	Brambilla, A. et al., Statistical Method for the Analysis of Interconnects Delay in Submicrometer Layouts, IEEE, 8/2001, pp. 957-966.	
	55.	Carothers, K., A Method of Measuring Nets Routability for MCM's General Area Routing Problems, 1999, pp. 186-192.	
	56.	Chen, H. et al., Physical Planning of On-Chip Interconnect Architectures, 2002, IEEE, International Conference, pp. 30-35.	
	57.	Cheng, K. et al., Manhattan or Non Manhattan? A Study of Alternative VLSI Routing Architectures, pp 47-52, 2000.	
	58.	Cheng, K., Steiner Problem in Octilinear Routing Model, a Thesis Submitted for the Degree of Master of Science, National University Singapore, 1995, pp. 1-122.	
	59.	Chip Model with Wiring Cost Map, August 1983, IBM Technical Disclosure Bulletin, vol. 26, iss. 3A, pp. 929-933.	
	60.	Cong, J. et al., Efficient Heuristics for the Minimum Shortest Path Steiner Arborization Problem with Applications to VLSI Physical Design, Cadence Design Systems and UCLA Computer Science Department, pp.88-95.	
	61.	Cong, J. et al., Performance-Driven Multi-Layer General Routing for PCB/MCM Designs, UCLA Computer Science Department, 1998, pp. 356-361.	
	62.	Enbody, R. et al., Near-Optimal n-Layer Channel Routing, 23 <sup>rd</sup> Design Automation Conference, 1986, pp. 708-714.	
	63.	Fang, S. et al., Constrained Via Minimization with Practical Considerations for Multi-Layer VLSI/PCB Routing Problems, 28 <sup>th</sup> ACM/IEEE Design Automation Conference, 1991, pp. 60-65.	
	64.	Hom, I. et al., Estimation of the Number of Routing Layers and Total Wirelength in a PCB Through Wiring Distribution Analysis, 1996, pp. 1-6.	

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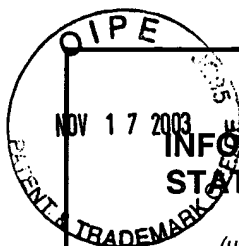
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				<b>First Named Inv nt r</b>	Steven Teig, et al.
				<b>Group Art Unit</b>	2825
				<b>Examiner Name</b>	
<b>Sheet</b>	6	of	7	<b>Attorney Docket Number</b>	SPLX.P0124

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<b>Examiner Signature</b>		<b>Date Considered</b>	
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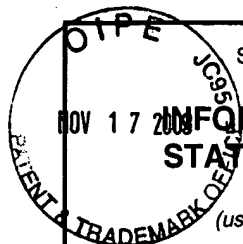
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				<b>Filing Dat</b>	1/13/02
				<b>First Named Invent r</b>	Steven Teig, et al.
				<b>Group Art Unit</b>	2825
				<b>Examiner Name</b>	
<b>Sheet</b>	7	of	7	<b>Attorney Docket Number</b>	SPLX.P0124

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